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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,733	01/18/2002	Jonathan Christopher Hardwick	MS164198.1/40062.162US01	4234

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LEE & HAYES PLLC
421 W RIVERSIDE AVENUE SUITE 500
SPOKANE, WA 99201

EXAMINER	
ALHIJA, SAIF A	

ART UNIT	PAPER NUMBER
2128	

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/053,733	HARDWICK ET AL.	
	Examiner	Art Unit	
	Saif A. Alhija	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/4/06*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *092205* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-39 have been presented for examination.

Response to Arguments

2. Applicant's arguments filed 6 March 2006 have been fully considered but they are not persuasive.

i) Examiner notes that the Interview dated 8 February 2006 took place between Applicants Attorney Michael Colby, Applicant Papaefstathiou, Examiner Saif Alhija, and Primary Examiner Fred Ferris. Examiner also notes that during the Interview dated 8 February 2006, Applicant submitted that the Papaefstathiou reference does not disclose the claimed workload definition sequence. In addition Applicant indicated that the claims were intended to reflect a workload request timeline as well as a dynamic scheduling policy. See attached Interview Summary. It is noted that neither of these limitations appears in the amended claims. The Examiner respectfully points out that the reference discusses workload definition sequences, for example Page 98 paragraph 2 discloses *"Workloads are implemented as a sequence of calls to the evaluation engine via the workload specification library"*, as well as Page 98 paragraph 3, *"The second stage is the workload specification where the evaluation engine stores the sequence of device calls."*

ii) Applicant argues that the reference does not disclose "a workload definition sequence having any sort of sequential relationship of request nodes." However, as per Page 98 paragraph 2, the reference discloses *"Workloads are implemented as a sequence of calls to the evaluation engine via the workload specification library"*, as well as on Page 98 paragraph 3, *"The second stage is the workload specification where the evaluation engine stores the sequence of device calls."* The specification of the instant application illustrates nodes in Figure 3. These nodes would correspond to a *"sequence of device calls"* as disclosed in the reference.

iii) Applicant argues that the reference does not disclose "a workload generator." However, as per page 99 Section 3.3 Paragraph 3 for example, the reference discloses, *"Hardware models have different workload requirements. The characteristic of the workload description is captured in the RUD type definition or schema."* Therefore workloads are generated for use based on different hardware models.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by **E. Papaeftstathiou "Design of a Performance Technology Infrastructure to Support the Construction of Responsive Software", hereafter referred to as Papaeftstathiou.**

Regarding Claims 1, 18, and 30:

Papaeftstathiou discloses a computer program product encoding a computer program for executing on a computer system a computer process for simulating performance of a software system including one or more resources, the computer process comprising:

generating one or more workload definition sequences defining the software system, each workload definition sequence including a plurality of workload request nodes, the workload definition sequence including at least two of the workload request nodes having a sequential relationship relative to different simulation intervals; **(Page 97, Section 3.1. Figure 1, Events/Evaluation Directives)**

receiving the workload definition sequence into an evaluation engine; **(Page 97, Section 3.1, Figure 1)**

and evaluating the one or more workload definition sequences to simulate the performance of the software system. **(Page 97, Section 3.1, Figure 1)**

Regarding Claims 2, 19, and 31:

Papaeftstathiou discloses the computer program product of claim 1 wherein each request node is defined independently of a specific hardware model instance. **(Page 97, Section 3.1, Paragraph 2, Lines 7-8. Figure 1)**

Regarding Claims 3 and 32:

Papaeftstathiou discloses the computer program product of claim 1 wherein each workload request node defines a transaction associated with a resource in the software system. **(Page 98, Section 3.1, Paragraph 3, Line 1)**

Regarding Claims 4, 20, and 33:

Papaeftstathiou discloses the computer program product of claim 1 wherein each workload request node represents one or more component events associated with a resource in the software system, **(Page 98, Section 3.2, Paragraph 1, Lines 2-3)**

Regarding Claims 5 and 34:

Papaeftstathiou discloses the computer program product of claim 1 wherein the one or more workload sequences are generated prior to the receiving and evaluating operations and substantially define all workload request nodes for simulating performance of the software system. **(Page 97-98, Section 3.1, Figure 1)**

Regarding Claims 6 and 21:

Papaeftstathiou discloses the computer program product of claim 1 wherein each workload request node defines a device option characterizing constraints on how the workload request node may be assigned to a resource in the software system. **(Page 98, Section 3.1, Paragraph 3, Lines 1-3)**

Regarding Claims 7 and 22:

Papaeftstathiou discloses the computer program product of claim 1 wherein at least one workload sequence includes a fork node defining a split of one workload sequence branch into a plurality of workload sequence branches. **(Page 98, Section 3.1, Paragraph 4, Line 1-2. Page 98, Section 3.2, Paragraph 1, Line 1-3)**

Regarding Claim 8 and 23:

Papaeftstathiou discloses the computer program product of claim 1 wherein at least one workload sequence includes a join node defining a combination of a plurality of workload sequence branches into a single workload sequence branch. **(Page 101, Section 4, Paragraph 3, Lines 12-19)**

Regarding Claim 9:

Papaeftstathiou discloses the computer program product of claim 1 wherein the computer process further comprises: receiving at least one of a monitoring trace, statistical data, and a workload specification to generate the one or more workload definition sequences. **(Page 97, Section 3.1, Paragraph 2, Lines 1-2)**

Regarding Claim 10:

Papaeftstathiou discloses the computer program product of claim 1 wherein the operation of receiving at least one of a monitoring trace, statistical data, and a workload specification comprises: receiving the monitoring trace defining a sequence of software system requests relating to an application request associated with the application. **(Page 97, Section 3.1, Paragraph 2, Lines 1-2)**

Regarding Claim 11:

Papaeftstathiou discloses the computer program product of claim 1 wherein the operation of receiving at least one of a monitoring trace, statistical data, and a workload specification comprises: receiving the statistical data defining a statistical distribution of one or more application requests associated with the application. **(Page 98, Section 3.1, Paragraph 3, Lines 7-11)**

Regarding Claim 12:

Papaeftstathiou discloses the computer program product of claim 1 wherein the operation of receiving at least one of a monitoring trace, statistical data, and a workload specification comprises: receiving the workload specification defining a set of resource request descriptions associated with the software system. **(Page 98, Section 3.1, Paragraph 3, Lines 1-2)**

Regarding Claims 13, 24, and 35:

Papaeftstathiou discloses the computer program product of claim 1 wherein each workload definition sequence comprises a start node associated with a start time, and the simulating operation comprises: activating at least one of the workload definition sequences, if

the start time associated with the start node of the workload definition sequence satisfies the simulation interval value. **(Page 102, Section 5, Figures 6 and 7)**

Regarding Claims 14, 25, 26, and 36:

Papaeftstathiou discloses the computer program product of claim 1 wherein the simulation operation comprises: translating at least one of the workload request nodes into one or more component events recorded in an event queue. **(Page 102, Section 5, Figures 6 and 7)**

Regarding Claims 15, 27 and 37:

Papaeftstathiou discloses the computer program product of claim 14 wherein the evaluating operation comprises: scheduling each component event with an instance of a hardware model associated with a resource in the software system. **(Page 102, Section 5, Figures 6 and 7)**

Regarding Claims 16, 28, and 38:

Papaeftstathiou discloses the computer program product of claim 14 wherein the evaluating operation comprises: scheduling, based on a scheduling policy, each component event with an instance of a hardware model associated with a resource in the software system. **(Page 102, Section 5, Paragraph 4, Lines 1-3, Figures 6 and 7)**

Regarding Claims 17 and 39:

Papaeftstathiou discloses the computer program product of claim 14 where the evaluating operation further comprises: receiving one of the component events from the event queue; identifying a resource associated with the component event; scheduling the component event with an instance of a hardware model associated with the resource in the software system;

and simulating the component event using the instance of the hardware model. **(Page 98, Section 3.2, Paragraph 1, Lines 1-3)**

Regarding Claim 29:

Papaeftstathiou discloses the performance simulation system of claim 18 wherein the evaluation engine comprises a simulator determining a duration of a component event assigning to an instance of a hardware model. **(Page 102, Section 5, Figures 6 and 7)**

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. All Claims are rejected.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saif A. Alhija whose telephone number is (571) 272-8635. The examiner can normally be reached on M-F, 11:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached on (571) 272-3780. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAA

May 4, 2006

HUGH JONES PH.D.
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100